AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A device (17) for detecting a multiplicity of different analytes in a liquid having a multiplicity of electrodes (15) that are insulated from one another and are arranged on a first side (12) of an electrically nonconductive plate (10) that is impermeable to the liquid, the plate being formed as a flat basic body having a first and a second side, the electrodes (15), at least in part, having an analyte-specific coating or analyte-specific molecules having, at least in part, different specificity and being able to be electrically contact-connected and individually conducted out from a second side (14) of the plate by means of electrical conductors extending through the plate (10), the coating or the molecules being analyte-specific by virtue of having a specific affinity for the analyte or a substance formed owing to the presence of the analyte, and the device having no outgoing lines, the plate (10) being a chip, the electrodes being arranged in the form of an electrode array.

2. (Original) The device (17) as claimed in claim 1, the electrical conductors being formed in one piece together with the electrodes (15).

3. (Currently Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the coating or the analyte-specific molecules at the electrodes (15) in each case being different.

4. (Currently Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the coating or the analyte-specific molecules comprising, in particular electrochemically inert, capture molecules.

5. (Original) The device (17) as claimed in claim 4, the capture molecules being, in particular single-stranded, nucleic acids, nucleic acid analogs, ligands, haptens, peptides, proteins, sugars, lipids or ion exchangers.

6. (Currently Amended) The device (17) as claimed in claim 4 ~~or 5~~, the capture molecules being covalently and/or directionally bound to the electrodes (15).

7. (Currently Amended) The device (17) as claimed in ~~one of claims 4 to 6~~ claim 4, the capture molecules, at least in part, being bound to the electrodes (15) by means of an, in particular electrochemically largely inert, intermediate layer.

8. (Original) The device (17) as claimed in claim 7, the intermediate layer being formed from silane.

9. (Currently Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the coating comprising at least one semipermeable covering of the electrodes (15).

10. (Original) The device (17) as claimed in claim 9, the semipermeable coverings in each case having a different permeability.

11. (Currently Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the electrical conductors being arranged in perforations (22) of the plate (10) which taper from the second side (14) of the plate (10), in particular conically,

toward the first side (12).

12. (Currently Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the plate (10) being arranged on the bottom of a microfluid chamber (42) or forming the bottom of a microfluid chamber.

13. (Secondly Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the plate (10) having more than 10, preferably more than 20, 40, 80, 100 or 160, particularly preferably more than 1000, especially more than 10,000 electrodes per cm^2.

14. (Secondly Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the electrodes (15), at least in part, being formed from particles.

15. (Secondly Amended) The device (17) as claimed in ~~one of the preceding claims~~ claim 1, the electrodes (15), at least in part, being formed from a non-metallic conductor, in particular carbon.

16. (Previously Amended in PCT Application) The device (17) as claimed in claim 15, the electrodes (15), at least in part, being pencil, glassy carbon, carbon fiber containing, carbon paste or plastic composite electrodes, preferably polycarbonate electrodes containing elementary carbon, in particular in the form of graphite or carbon black.

17. (Secondly Amended) A measuring device, comprising a device (17) as claimed in ~~one of the preceding claims~~ claim 1, in which the electrodes (15) comprise at least one reference electrode and at least one counterelectrode and also a multiplicity of

working electrodes, the measuring device containing current/voltage converters, a potentiostat and a means for measuring the currents flowing through the working electrodes, and the electrodes (15) being electrically connected to the potentiostat for generating a predetermined voltage profile between the working electrodes and the reference electrode, one of the current/voltage converters being connected downstream of each of the working electrodes in order to hold all the working electrodes at the same potential.

18. (Secondly Amended) A method for producing a device (17) as claimed in ~~one of claims 1 to 16~~ claim 1 having the following steps of:

a) producing a composite of elongate electrode material (15) that is essentially arranged parallel and insulating material surrounding the electrode material (15), the composite being produced by means of

- encapsulating a solid electrode material (15) with a curing insulating material,

- introducing a solid electrode material (15) into essentially parallel cut-outs or perforations (22) of a solid insulating material or into a plastically deformable insulating material,

- filling pasty or liquid curing electrode material (15) into essentially parallel cut-outs or perforations (22) of a solid one-piece insulating material or of a stacked plate-type insulating material with congruently arranged perforations (22),

- connecting electrode material (15), having a sheathing (18) comprising insulating material, by melting, potting or

adhesively bonding the sheathing (18), or

- extruding a composite made of electrode material (15) surrounded by insulating material (18),
and

b) separating the composite essentially perpendicularly to the longitudinal direction of the electrode material (15) by cutting, sawing or by means of a separating disk or by taking apart the stacked plate-type insulating material.

19. (Secondly Amended) A method for producing a device (17) as claimed in ~~one of claims 1 to 16~~ claim 1 having the following steps of:

a) providing an electrically nonconductive plate (10) with perforations (22),

b) applying a pasty curing electrode material (15) to a first side (12) of the plate (10),

c) pressing the electrode material (15) into the perforations (22), and

d) removing the electrode material (15) present between the perforations (22) in so far as said electrode material (15) electrically conductively connects the electrode material (15) present in the perforations.

20. (Secondly Amended) A method for producing a device (17) as claimed in ~~one of claims 1 to 16~~ claim 1 having the following steps of:

a) providing an electrically nonconductive plate (10) with

perforations (22),

b) placing an aperture mask (24) having holes (26) that correspond to the perforations (22), at least in part, or a screen printing mask having permeable areas that correspond to the perforations, at least in part, onto the first side (12) of the plate (10) such that the holes (26) or the areas are congruent, at least in part, with the perforations (22) of the plate (10),

c) applying a pasty curing electrode material (15) to the aperture mask (24) or screen printing mask,

d) pressing the electrode material (15) into the perforations (22) by way of the holes or permeable areas, and

e) removing the aperture mask (24) or screen printing mask from the plate (10).

21. (Secondly Amended) The method as claimed in ~~one of claims 18 to 20~~ claim 18, an analyte-specific coating being applied to the electrode material (15) or analyte-specific molecules being introduced into the electrode material (15).

22. (Previously Amended in PCT Application) The method as claimed in claim 21, capture molecules, in particular electrochemically inert capture molecules, being applied or introduced as coating or analyte-specific molecules.

23. (Secondly Amended) The method as claimed in claim 21 ~~or 22~~, in each case different coatings being applied to the electrode material (15) or in each case different analyte-specific molecules being introduced into the electrode material (15).

24. (Secondly Amended) The method as claimed in ~~one of claims 21 to 23~~ claim 21, the capture molecules used being, in particular single-stranded, nucleic acids, nucleic acid analogs, ligands, haptens, peptides, proteins, sugars, lipids or ion exchangers.

25. (Secondly Amended) The method as claimed in ~~one of claims 21 to 24~~ claim 21, the capture molecules being covalently and/or directionally bound to the electrode material (15) or being synthesized or electrochemically deposited on the electrode material (15).

26. (Secondly Amended) The method as claimed in ~~one of claims 21 to 25~~ claim 21, the capture molecules, at least in part, being bound to the electrode material (15) by means of an, in particular electrochemically largely inert, intermediate layer or being synthesized on the intermediate layer.

27. (Previously Amended in PCT Application) The method as claimed in claim 26, the intermediate layer being formed from silane.

28. (Secondly Amended) The method as claimed in ~~one of claims 18 to 27~~ claim 18, the electrode material (15) being coated with at least one semipermeable covering.

29. (Previously Amended in PCT Application) The method as claimed in claim 28, the electrode material (15) in each case being coated with semipermeable coverings having different permeability.

30. (Secondly Amended) The use of a device (17) as claimed in ~~one of claims 1 to 16~~ claim 1 for detecting at least one analyte in a liquid, the liquid being brought into contact with

electrodes (15) on the first side (12) of the plate (10) of the device (17) and the electrodes (15) being electrically contact-connected from the second side (14) of said plate.

31. (Previously Amended in PCT Application) The use as claimed in claim 30, the liquid being brought into contact with the electrodes (15) under conditions under which the analyte or a substance formed owing to the presence of the analyte binds to capture molecules present at the electrodes (15) and the analyte bound to the capture molecules or the substance bound thereto is detected electrically, electrochemically, optically, photoelectrically, enzymatically, by means of electroluminescence or by means of chemiluminescence or by means of a combination thereof.

32. (Secondly Amended) The use as claimed in claim 30 ~~or 31~~, at least one electrode (15) being coated with a semipermeable covering and selectively only such analytes, decomposition products of analytes or substances which penetrate the covering being detected electrically, electrochemically, optically, photoelectrically, enzymatically, by means of electroluminescence or by means of chemiluminescence or by means of a combination thereof.

33. (Secondly Amended) The use as claimed in ~~one of claims 30 to 32~~ claim 30, the analyte being a biomolecule, in particular a nucleic acid, a protein, an antigen, a sugar, a lipid, a cell or a virus.

34. (Secondly Amended) The use as claimed in ~~one of claims 30 to 33~~ claim 30, the analyte having a labelling substance.

35. (Secondly Amended) The use as claimed in ~~one of claims 30 to 34~~ claim 30, a redox reaction or a catalytic evolution of hydrogen being detected electrochemically.

36. (Secondly Amended) The use as claimed in ~~one of claims 30 to 35~~ claim 30, the electrochemical detection being effected by means of differential pulse voltammetry (DPV), chronopotentiometric stripping analysis (CPSA) or detection of a change in resistance or impedance.

37. (Secondly Amended) The use as claimed in ~~one of claims 30 to 36~~ claim 30, the electrochemical detection comprising the following steps of:

a) providing a device (17) as claimed in one of claims 1 to 16, the device (17) having at least one counterelectrode and a reference electrode and also a multiplicity of working electrodes,

b) bringing the liquid into contact with the working, counter- and reference electrodes,

c) simultaneously applying a predetermined voltage profile between the working electrodes and the reference electrode, and

d) measuring the currents flowing through the working electrodes, all the working electrodes being held at the same potential during measurement.

38. (Secondly Amended) The use as claimed in ~~one of claims 30 to 37~~ claim 30, a potential interval in which essentially only the analyte or the substance causes a signal being chosen for measurement for the electrochemical detection.